

WHAT IS CLAIMED IS:

1. A height adjusting apparatus for a suction brush of an upright vacuum cleaner,  
comprising:

5 a suction brush body;

a height adjusting knob rotatably disposed at a seating portion formed in the suction brush  
body, and having a cam curve portion formed at a part of an end of the height adjusting knob  
inserted into the suction brush body, the cam curve portion having a height difference between a  
starting point and an end point thereof and a plurality of recessed grooves formed between the  
10 starting point and the end point;

a height adjusting shaft integrally formed with a rod member which is contacted with the  
cam curve portion and lifted up and down according to a rotational direction of the height  
adjusting knob; and

a brush front wheel rotatably coupled to the height adjusting shaft.

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2. The apparatus of claim 1, wherein the suction brush body comprises a brush  
frame which has a suction portion for sucking dust at a lower surface thereof and in which the  
height adjusting shaft is disposed; and a brush cover for sealing an upper surface of the brush  
frame except for the suction port.

3. The apparatus of claim 2, wherein the seating portion comprises a seating member disposed at the brush frame and a seating hole formed through the brush cover.

5 4. The apparatus of claim 3, wherein the seating member is partially cut away to form a space portion for allowing the seating member to be elastically deformed.

5. The apparatus of claim 3, wherein the height adjusting knob comprises a cylindrical knob body; a handle portion formed at an upper surface of the knob body, for rotating  
10 the height adjusting knob; a flange portion protruded along an outer circumferential surface of the knob body, for deciding an inserting position of the knob body; a fixing protrusion seated in a fixing groove formed at an inner surface of the seating member, for procedurally controlling a rotation of the handle; and a cam curve portion rounded so that the recessed grooves are softly connected to each other.

15 6. The apparatus of claim 5, wherein the fixing protrusion is protruded at a lower surface of the flange portion, and a surface of the fixing protrusion contacted with the fixing groove is rounded.

7. The apparatus of claim 5, wherein the multiple fixing grooves are formed in a length direction of the seating member to be apart from each other at regular intervals, and each fixing groove has a shape corresponding to the fixing protrusion.

5 8. The apparatus of claim 5, wherein the multiple fixing grooves has a number corresponding to the number of recessed grooves of the cam curve portion.

9. The apparatus of claim 2, wherein the height adjusting knob is rotatably coupled to a shaft receiving groove formed a bottom surface of the brush frame.

10 10. The apparatus of claim 9, wherein the shaft receiving groove is communicated with a front wheel receiving hole formed through the brush frame so that the front wheel is not interfered with the brush frame, and has a plurality of latching protrusions for preventing a separation of the height adjusting shaft.

15 11. The apparatus of claim 9, wherein the height adjusting shaft comprises:  
a shaft body connected at both ends with a brush front wheel;  
a rotary shaft connected at both ends to the shaft body, secured to the shaft receiving groove by a screw to rotate the height adjusting shaft; and

a reinforcing rib disposed between the shaft body and the rotary shaft to prevent the shaft body from twisting.

12. The apparatus of claim 11, wherein the shaft receiving groove is communicated with  
5 the front wheel receiving hole formed in the brush frame so that the front wheel is not interfered with the brush frame.

13. The apparatus of claim 11, wherein the height adjusting shaft is made of an aluminum.

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